HYDROXIDE CONTAINING DOUBLE METAL CYANIDE (DMC) CATALYSTS

ABSTRACT OF THE DISCLOSURE

The present invention provides a crystalline, hydroxide containing double metal cyanide (DMC) catalyst of the formulae (I) or (II),

$$M^1_x[M^2(CN)_6]_yOH \cdot L \qquad (I)$$

$$M^1_x[M^2(CN)_6]_y \cdot zM^1(OH)_q \cdot L \qquad (II)$$

wherein M^1 represents a metal selected from Zn^{+2}, Fe^{+2}, Ni^{+2}, Mn^{+2}, Co^{+2}, Sn^{+2}, Pb^{+2}, Fe^{+3}, Mo^{+4}, Mo^{+6}, Al^{+3}, V^{+4}, V^{+5}, Sr^{+2}, W^{+4}, W^{+6}, Cu^{+2} and Cr^{+3}, M^2represents a metal selected from Fe^{+2}, Fe^{+3}, Co^{+2}, Co^{+3}, Cr^{+2}, Cr^{+3}, Mn^{+2}, Mn^{+3}, Ir^{+3}, Ni^{+2}, Rh^{+3}, Ru^{+2}, V^{+4} and V^{+5}, L represents an organic ligand and x, y and q are chosen to maintain electroneutrality. Further provided are processes for the production of the inventive DMC catalysts. The crystalline, hydroxide containing DMC catalysts of the present invention may find use in the preparation of polyols, such as polyether polyols.